FIG.1

```
                                 A                        1         2
alpha1(I)    YYRADD...A NVVRDRDLEV DTTLKSLSQQ IENIRSPEGS RKNPARTCRD LKMCHSDWKS
alpha2(I)    FYRADQPRSA PSLRPKDYEV DATLKSLNNQ IETLLTPEGS RKNPARTCRD LRLSHPEWSS
alpha1(III)  YYGDE....P MDFKINTDEI MTSLKSVNGQ IESLISPDGS RKNPARNCRD LKFCHPELKS
             -          -        #-  --###--  #  ## -  -#~##  ####### ### #~  #

                               3          4 F        5
alpha1(I)    GEYWIDPNQG CNLDAIKVFC NMETGETCVY PTQPSVAQKN WYISKNPKDK RHVWFGESMT
alpha2(I)    GYYWIDPNQG CTMEAIKVYC DFPTGETCIR AQPENIPAKN WYRS..SKDK KHVWLGETIN
alpha1(III)  GEYWVDPNQG CKLDAIKVFC NMETGETCIS ANPLNVPRKH WW.TDSSAEK KHVWFGESMD
             #  ##~#####  #  --####-#  -  #####~  ~   ~~~ #~ #~~   ~ ~# ~###~##~~

                              B          C          G        6
alpha1(I)    DGFQFEYGGQ GSDPADVAIQ LTFLRLMSTE ASQNITYHCK NSVAYMDQQT GNLKKALLLX
alpha2(I)    AGSQFEYNVE GVTSKEMATQ LAFMRLLANY ASQNITYHCK NSIAYMDEET GNLKKAVILQ
alpha1(III)  GGFQFSYGNP ELPEDVLDVQ LAFLRLLSSR ASQNITYHCK NSIAYMDQAS GNVKKALKLM
             #  ##  #          -  #  #~#~##--  ########### ##~####~ ~  ##~###~ #

                                             7
alpha1(I)    GSNEIEIRAE GNSRFTYSVT VDGCTSHTGA WGKTVIEYKT TKTSRLPIID VAPLDVGAPD
alpha2(I)    GSNDVELVAE GNSRFTYTVL VDGCSKKTNE WGKTIIEYKT NKPSRLPFLD IAPLDIGGAD
alpha1(III)  GSNEGEFKAE GNSKFTYTVL EDGCTKHTGE WSKTVFEYRT RKAVRLPIVD IAPYDIGGPD
             ###~ #~ ##  ###~###~#  ###~  #   #~##~~##~#  #  ###~~#  ~## #~#~~#

                     8
alpha1(I)    QEFGFDVGPV CFL
alpha2(I)    HEFFVDIGPV CFK
alpha1(III)  QEFGVDVGPV CFL
             ~## #~### ##
```

# FIG. 2

N-propeptide   triple helical domain   C-propeptide

proα1(III)Δ1

proα2(I)Δ1

proα1(III):(I)CP

proα2(I):(III)CP

proα2(I):(III)A

proα2(I):(III)F

proα2(I):(III)B

proα2(I):(III)C

proα1(III):(I)C

proα2(I):(III)BGR

# FIG. 3

|  | reduced | | | | non-reduced | | | |
|--|--|--|--|--|--|--|--|--|
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  | α1 (III) | α2 (I) | α2 CP | α1 CP | α1 (III) | α2 (I) | α2 CP | α1 CP |
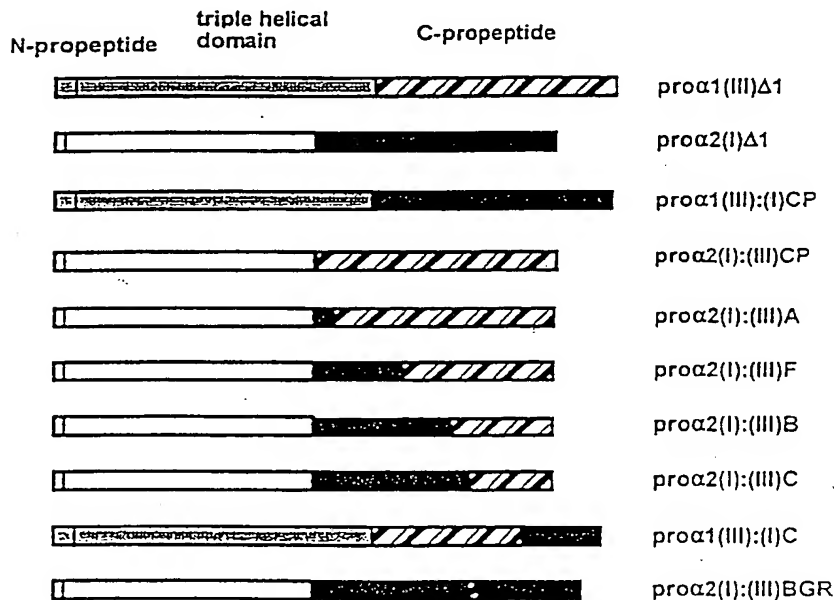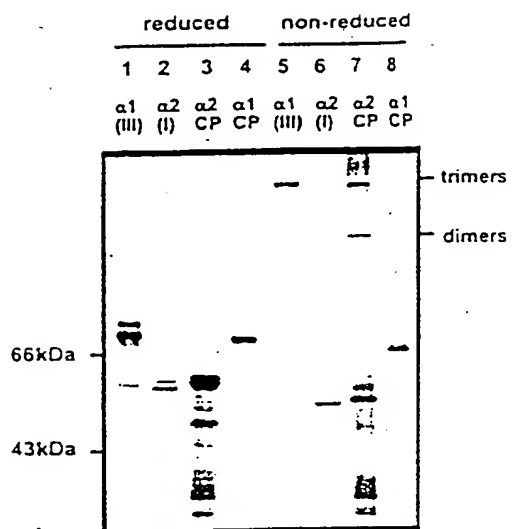
FIG. 4

| Lane | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--|--|--|--|--|--|--|--|--|--|--|--|
| temp. (deg C) | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | unt. |

FIG. 5

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
|  | α1 (III) | α2 (I) | α2 CP | α2 A | α2 F | α2 Fₖ | α2 Bₖ | α2 Cₖ | α1 C |

66kDa —

FIG.6

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
|  | α1 (III) | α2 (I) | α2 CP | α2 A | α2 F | α2 Fₖ | α2 Bₖ | α2 Cₖ | α1 C |

43kDa —

29kDa —

FIG.7

reducing          non-reducing

1    2    3        4    5    6

α1   α2   α2       α1   α2   α2
CP   CP   BGR      CP   CP   BGR

66kDa —



$$\underline{\underline{\mathsf{F\,I\,G\,.\,8}}}$$

1    2    3

α1   α2   α2
CP   CP   BGR

66kDa —

29kDa —



$$\underline{\underline{\mathsf{F\,I\,G\,.\,9}}}$$

reduced            non-reduced

1   2   3          4   5   6

BG  BG  BG         BG  BG  BG
s-c c-s l-m        s-c c-s l-m

66kDa —

# FIG.10

```
              1       2       3
             BG      BG      BG
             s-c     c-s     l-m
```

43kDa —

29kDa —

18.4kDa —

# FIG.11

reducing　　non-reducing

| 1 | 2 | 3 | 4 | 5 |

α1　α2　　α1　α2
(III)　BGR　(III)　BGR

66kDa

43kDa

29kDa
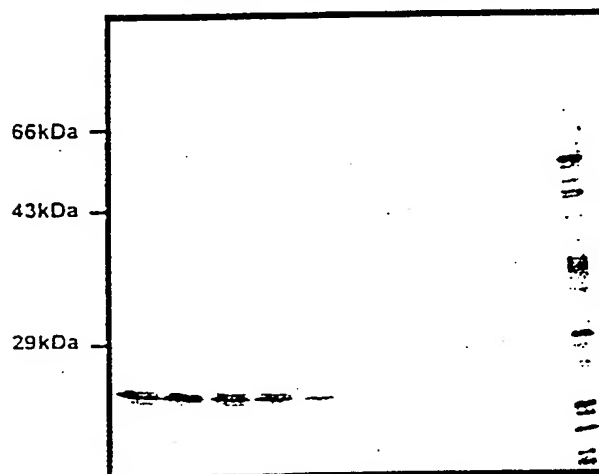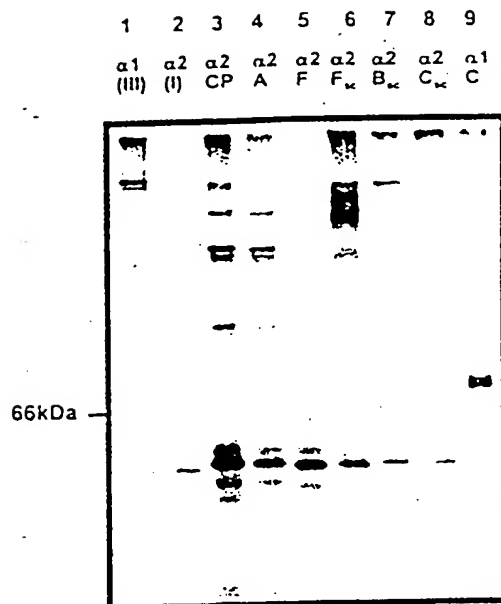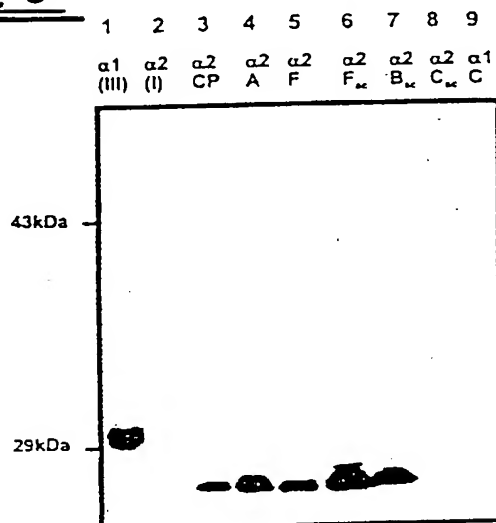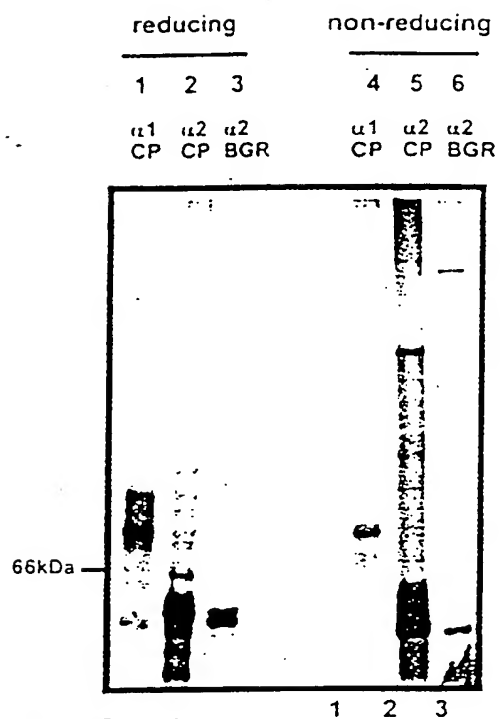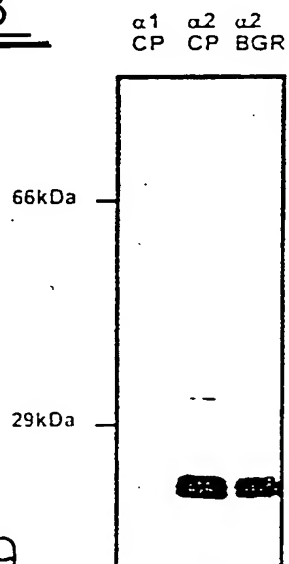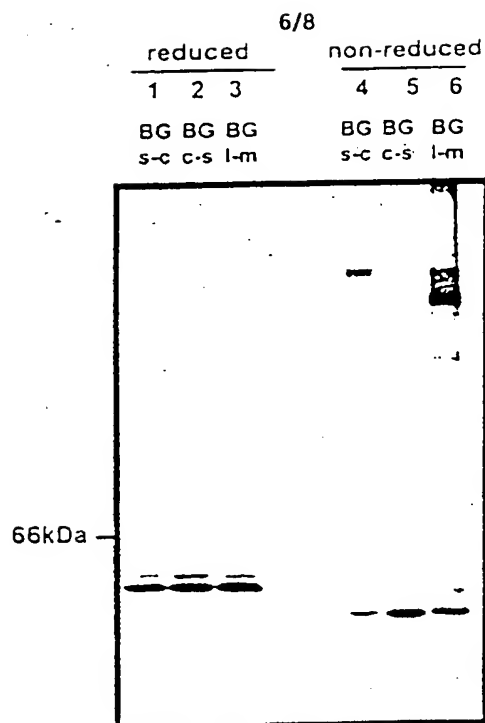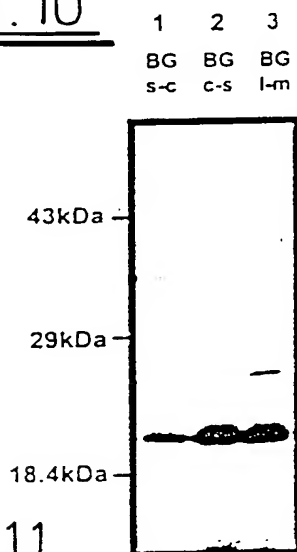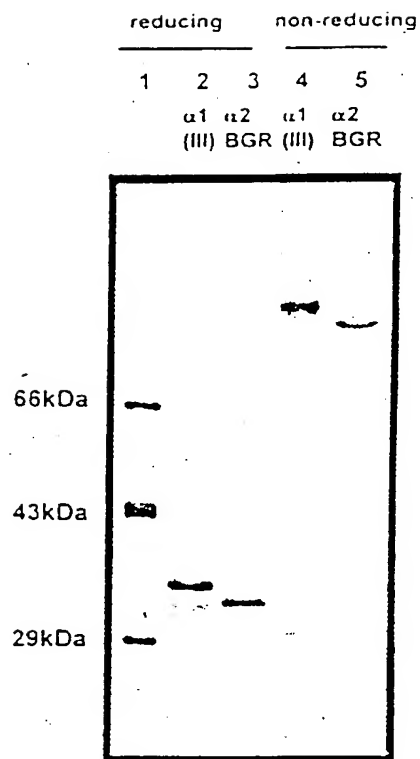
# FIG.12

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| alpha1(I) | G | G | Q | G | S | D | P | A | D | V | A | I | Q | L | T | F | L | R | L | H | S | T | E |
| alpha2(I) | N | V | E | G | V | T | S | K | E | M | A | T | Q | L | A | F | L | R | L | L | A | N | Y |
| alpha1(II) | G | D | D | N | L | A | P | N | T | A | N | V | Q | L | T | F | L | R | L | L | S | T | E |
| alpha1(III) | G | N | P | E | L | P | E | D | V | L | D | V | Q | L | A | F | L | R | L | L | S | S | R |
| alpha1(V) | V | D | A | E | G | N | P | V | G | V | · | V | Q | H | T | F | L | R | L | L | S | A | S |
| alpha2(V) | G | D | H | Q | S | P | N | T | A | I | · | T | Q | H | T | F | L | R | L | L | S | K | E |
| alpha1(XI) | L | D | V | E | G | N | S | I | N | M | · | V | Q | H | T | F | L | K | L | L | T | A | S |
| alpha2(XI) | V | D | S | E | G | S | P | V | G | V | · | V | Q | L | T | F | L | R | L | L | S | V | S |

FIG.13